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rising above the level of the waves, as this would sensibly affect the truth of the scale. But a little experience would soon make the use of the instrument familiar.

# Nº. XXXI.

*An Inquiry into the Question, whether the APIS MELLIFICA, or TRUE HONEY-BEE, is a native of America.*

Read Feb.  
1, 1792,

**S**O many animals and vegetables have been introduced into the countries of America, since the great discovery of Columbus, that naturalists are frequently at a loss to determine, which species are natives, and which are foreigners. This is particularly the case with respect to plants. Many of those species which are now distributed, in profusion, through extensive tracts of country; which are not merely confined to the gardens, the meadows, the fields, and waste places, but have even insinuated themselves into the thickest forests and the most lofty mountains, growing luxuriantly in their new situations, are, undoubtedly, European and other colonies, which have been introduced either by accident or by the hands of man. At some future day, I shall communicate the result of my inquiries on this subject to the Philosophical Society. Meanwhile, I shall mention a few instances, which more readily occur to me. The *Plantago major*, or *Greater-Plantain*, the *Verbascum Thapsus*, or *Great White-Mullein*, the *Chenopodium album*, or *Common Wild-Orache*, the *Antirrhinum Linaria*, or *Yellow Toad-Flax*, the *Hypericum perforatum*, or *Common St. John's wort*, the *Leontodon Taraxacum*, or

*Common-Dandelion*, and the *Chrysanthemum Leucanthemum*, or *Greater-Daisy*\*, are, certainly foreigners, which have extended the empire of their growth since the discovery of the new-world, though they are generally considered, both by the vulgar and by the more enlightened, as truly indigenous to our country.

Within the term of three hundred years, many animals originally not natives of this country have likewise made their way into it. Thus, it may be doubted whether the *Rat*, the *Mouse*, the *Tinea*, or *Moth*, so pernicious to our clothes, the *Flea*, the *Bed-Bug*, and many others, were known in the countries of America before the arrival of the Europeans in this continent. It has lately been asserted that the TRUE HONEY-BEE, the *Apis mellifica* of Linnæus, is not a native of America, and, I think, the opinion is well founded, though it has recently been controverted by the reverend Dr. Belknap, in a dissertation which he has published on the subject †. This dissertation I have read with attention; but so far from weakening it has strengthened the opinion that this species of Bee was not found in the new-world before Columbus conducted us to the knowledge of it.

The ingenious Mr. Jefferson seems to have given rise to this inquiry. In his valuable work, entitled *Notes on the State of Virginia*, this respectable author has the following words. "The honey-bee is not a native of our continent. Marcgrave indeed mentions a species of honey-bee in Brasil. But this has no sting, and is therefore

\* My learned and ingenious friend Mr. Pennant has mentioned the *Leontodon Taraxacum* and the *Chrysanthemum Leucanthemum* among those plants which are common to Kamtskatka and the east side of America. See his *Arctic Zoology*, Introduction, page cxxxiv. As these two plants are natives of Kamtskatka, it is highly probable that they may be indigenous on the west side of America. Be this, however, as it may, I am confident that they are not natives of the Atlantic parts of the northern continent.

† It is annexed to an ingenious and well-written paper, entitled *A discourse Intended to commemorate the discovery of America by Christopher Columbus*. Boston: 1792. 8vo.

fore different from the one we have, which resembles perfectly that of Europe. The Indians concur with us in the tradition that it was brought from Europe; but when, and by whom, we know not. The bees have generally extended themselves into the country, a little in advance of the white settlers. The Indians therefore call them the white man's fly, and consider their approach as indicating the approach of the settlements of the whites\*."

Dr. Belknap admits that these facts, adduced by Mr. Jefferson, are true; "but they will not", says he, "warrant his conclusion that the honey-bee, meaning the one resembling that of Europe, is not a native of our continent†." I shall examine the grounds of the doctor's objections.

On his return to Europe, after having discovered the American islands, Guanahani, Cuba, Hispaniola, &c. Columbus finding his ship endangered by a violent storm, and fearing that the knowledge of those countries to which he was conducting the nations of Europe, was likely to perish, is said to have written an account of his discovery on parchment, which he enclosed in a cake of wax, and then committed the whole to the sea, "in hopes," to use the words of Robertson, "that some fortunate accident might preserve a deposit of so much importance to the world‡." This wax Columbus procured in Hispaniola§.

A naturalist cannot but be surprized to find Dr. Belknap considering this story of the cake of wax as a proof "that bees were known in the islands of the West-Indies," when they were discovered by Columbus, if by the word

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"bees"

\* See page 121 of the English, and page 79 of the American, edition.

† See the Dissertation, page 117.

‡ The History of America. Vol. I. p. 126. Basil: 1790. 8vo.

§ See the *Life of Columbus*, written by his son, chap. xxx. Columbus also mentions this story of his intrepidity and the cake of wax, in a letter which he wrote to Ferdinand and Isabella. See Robertson's *History of America*. Vol. I. note xvi.

“bees” the doctor means; what I presume he does, the true honey-bees. The genus *apis*, or bee, it should be remembered, is very extensive. The learned entomologist Fabricius, in his *Species Insectorum*, which was published in 1781, has given us the names and discriminative characters of eighty-two species. Of this number sixteen are said to be natives of the two continents and islands of America. There can be little doubt that there are many more. Many of these bees, beside the *apis mellifica*, form honey. We shall presently see, from Clavigero, that in the country of Mexico, there are, at least, six species. Nor is the bee the only insect which forms honey. Some species of the genus *vespa*, or wasp, do the same, depositing their stores in trees, in the earth, &c. Without, therefore, something more particular concerning the wax which was procured by Columbus in Hispaniola, we ought not to conclude that it was the production of the honey-bee, and with the lights which we have already received, we are nearly authorised to affirm that it was not.

It is much more probable, that this wax was the fabric of some other species of the bee. It is not impossible, however, that it was the produce of a vegetable, since we are acquainted with some plants which furnish large quantities of wax: such is the *Myrica cerifera*, which grows very commonly in various parts of the new-world, as well as in the southern countries of Africa.

Dr. Belknap's second argument seems to deserve more attention. “The indefatigable Purchas,” says he, “gives us an account of the revenues of the empire of Mexico, before the arrival of the Spaniards, as described in its annals; which were pictures drawn on cotton cloth. Among other articles he exhibits the figures of covered pots, with two handles, which are said to be pots of “bees ho-

mē\*.” Of these pots, two hundred are depicted in one tribute-roll, and one hundred in several others†.”

The learned Abbé Clavigero confirms this account, in his excellent *History of Mexico*, lately published. He informs us that the Mexican kings received as a tributary payment, a part of every useful production, both of nature and art, and, among other articles of revenue, he mentions six hundred cups of honey, which were annually paid by the inhabitants of the southern parts of the empire of Mexico‡.

In the first book of his work, which is devoted to the natural history of the country, Clavigero mentions six different species of honey-making bees, four of which are said to be destitute of stings: one of the two others, he says, “agrees with the common bee of Europe, not only in size, shape and colour; but also in its disposition and manners, and in the qualities of its honey and wax§”.

In answer to these objections of Dr. Belknap, it is obvious to remark, that as there are, at least, six distinct species of honey-making bees in Mexico, five of which are said, by Clavigero, to be different from the *apis mellifica*, or true honey-bee of Europe, we are certainly not warranted to conclude, that the honey which was paid in tribute to the monarchs of Mexico, was the fabric of this most important species of the family.

I will not deny that the true honey-bee is *now* found in Mexico; not only because so respectable an author as Clavigero has asserted that it is, or at least a bee agreeing with it, but because we can hardly suppose that the Spaniards, in the long period of more than two centuries and an half, would have neglected to introduce an animal of  
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\* Purchas. Vol. iv.

† See the Dissertation, p. 118.

‡ See book vii. p. 351.

§ Book i. p. 68.

so much importance. But it must be recollected that Clavigero only informs us, that this true honey-bee is now found in Mexico. He has not attempted to prove that it was found there *two or three hundred years ago*. In order to ascertain this point, with more certainty, it is necessary to recur to the more early writers concerning America, particularly Mexico. I am sorry that I have it not in my power to consult the work\* of Hernandez, who was sent to Mexico, at the expence of Philip the second, king of Spain, and who devoted much time to the natural history of the animals, vegetables, and minerals of that rich country. This physician, however, does not appear to have been a very accurate naturalist; so that even though he may have given an account of the bees of Mexico, it is more than probable, that the information which we might derive from him would not enable us to throw much light on the subject. The only early author, in my possession, who seems to give us any information on the question is Joseph Acosta. This learned Jesuit, who has been styled, by Father Feyho, the Pliny of America, resided for some time in Mexico, in Peru, and in other parts of America, towards the close of the sixteenth century. In his *Historia Natural y Moral de las Indias*, which was published at Madrid, in 1590, a few years after his return from Mexico, he tells us that in the Indies, under which general name he comprehends the countries of America, "there are few swarmes of Bees, for that their honnie-combes are found in trees, or under the ground, and not in hives as in *Castille*. The honny combes," he continues, "which I have seene in the Province of *Charcas*, which they call *Chiguanas*, are of a grey colour, having little juyce, and are more like unto sweete strawe, than to honey combs. They say the Bees are little, like unto flies; and that

\* *Plantarum, Animalium & Mineralium Mexicanorum Historia*. Romæ : 1651. fol.

that they swarme under the earth. The honey is sharp and black, yet in some places there is better, and the combs better fashioned, as in the province of *Tucuman* in *Chille*, and in *Carthagene*\*.”

The buccaneer Lionel Wafer mentions bees among the productions of the Isthmus of Darien; but the information which he has given us will not decide the question, which I am examining. He supposes, that some of the bees of this country are destitute of stings, because he saw the Indians put their naked arms into the nests, without being stung†. Wafer was in Darien in the year 1679.

The next argument employed by Dr. Belknap is extremely feeble. He finds, in Purchas, that when Ferdinand de Soto came with his army to Chiaha, which was in July 1540, he found among the provisions of the native Indians of that place, “a spot full of honie of bees‡.” As there were no Europeans settled on the continent of America at this time except in Mexico and in Peru, the doctor seems to think this solitary pot of honey favours his opinion, for immediately after he says “it is evident” that honey-bees (meaning the true honey-bees) were found as far to the northward as Florida, before the arrival of the Europeans in the islands and on the continent of America.

Let us examine this argument. If the existence of the true honey-bee in Florida as early as the year 1540, was supported by nothing more than the pot of honey found at the village of Chiaha, I think, the ground of argument is very feeble indeed: for it no more follows that this honey was the fabric of the *apis mellifica* than that the tributary honey of the Mexicans was the production of that animal.

But

\* The Naturall and Morall Historie of the East and West Indies, &c. p. 302 and 304. English translation. London 1604. 4.

† Description of the Isthmus of America. London 1704. 8vo.

‡ Purchas. Vol. v. p. 1539.



But the following quotation renders it probable, that at the period which I have just mentioned, the true honey-bee was not found in Florida. In a curious little work, entitled *A Relation of the invasion and conquest of Florida by the Spaniards, under the command of Fernando de Soto*, which was written by a Portuguese gentleman, who accompanied the Spanish general in his "mad adventures"† in Florida, we are informed that the Indians of Chiaha "had a great deal of Butter, or rather Sewet, in pots that run like Oyl; they said it was Bear's grease: we found Walnut-Oyl there also, as clear as the Sewet, and of a very good taste, with a pot of Honey, though before nor after we found neither Bees nor Honey in all *Florida*." \*

This simple relation of a fact is very pointed. Soto and his successor Louis Moscosod, Alvarado had rambled over an extensive tract of country from the end of May, or the beginning of June, 1539 to July 1543. The granaries and the store-houses of the unfortunate natives were constantly ransacked by an army of needy Spaniards. The troops passed through extensive forests, and yet they never saw but one pot of honey, and no bees at all. If the honey-bee had been a native of the countries which were the scene of Soto's villanies, the valuable products of this little insect would have been more frequently met with, and the bees, in territories pregnant with a profusion of sweet-smelling and nectareous plants, would, doubtless, have been seen very often, and in great numbers.

Thus far the opinion of Mr. Jefferson seems to be strongly supported by historical evidence; and, I think, we are warranted to assert that the true honey-bee was not originally an indigenous animal of the southern parts of the American continent. But this opinion may be supported by other arguments. My

† The Modern Universal History. Vol. XL. page 393. Edition of 1763.

\* See page 72.

My friend the ingenious and accurate Mr. William Bartram informs me, that when he was in West-Florida, in the year 1775, he was shown, as a curiosity, a bee-hive, which, he was told, was the only one in the whole of that extensive country. It had been introduced there from England, when the English took possession of Pensacola, in the year 1763. Mr. Bartram, however, allows, that the honey-bee is now found wild in the country of East-Florida, where, he says, it has been known for a considerable time, perhaps an hundred years. But he is persuaded, from his inquiries, that it is not a native of the country. Mr. Le Page Du Pratz says "the bees of Louisiana lodge in the earth, to secure their honey from the ravages of the bears. Some few indeed," he continues, "build their combs in the trunks of trees, as in Europe; but by far the greatest number in the earth in the lofty forests, where the bears seldom go §." The bees here spoken of as lodging their honey in the earth, I am persuaded, are not the true honey-bee, and Mr Du Pratz's idea that they make choice of the earth to secure it from the bears requires to be better supported. The honey would be as secure from bears in the cavities of trees as it would in the earth. I have had an opportunity of seeing many of these honey-insects, which lodge their fabric in the earth. They are not the *apis mellifica*, nor do they belong to this family. They are more nearly allied to the vespa, or wasp-tribe. The bears prove very destructive to their habitations, devouring their honey, and killing great numbers of the insects.

"As to the circumstance of the bees" extending themselves a little in advance of the white settlers," it cannot, says Dr. Belknap, "be considered as a conclusive argument in favour of their having been first brought from Europe.

VOL. III.

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It is well known," he continues; "that where land is cultivated, bees find a greater plenty of food than in the forest. The blossoms of fruit trees, of grasses and grain, particularly clover and buck wheat, afford them a rich and plentiful repast; and they are seen in vast numbers in our fields and orchards at the seasons of those blossoms. They therefore delight in the neighbourhood of "the white settlers," and are able to increase in numbers, as well as to augment their quantity of stores, by availing themselves of the labour of man. May it not be from this circumstance that the Indians have given them the name of "the white man's fly;" and that they "consider their approach (or frequent appearance) as indicating the approach of the settlement of the whites?\*

I agree with Dr. Belknap, that the circumstance of the bees "extending themselves a little in advance of the white settlers," is not "a conclusive argument" in favour of the opinion, that these little insects are not natives of America. Still, however, in my opinion, the argument has considerable weight.

It has just been observed that the Indians call the bee, *the white man's fly*. I have always considered this circumstance as a strong argument in support of Mr. Jefferson's assertion, that this insect is not a native of America. For notwithstanding the fewness of arts and the rude state of the society of these people, they are by no means incurious observers of the animals and vegetables of their country, and they mark the progress of those which the whites have introduced with the most accurate attention. Thus, they call the *Greater-Plantain* by a name which signifies the *Englishman's foot*, and say, that wherever an European has walked, this plant grows in his foot-steps, meaning, by this figurative mode of expressing themselves, that before the

\* See the Dissertation page 121 and 122.

the arrival of the Europeans in America, the *Plantain* was not known in the country. In like manner, when the Indians call the honey-bee the white-man's fly, it is evident that the mean to convey an idea, that this insect is not a native of America, but that it has been introduced by the Europeans. Whenever the southern Indians see the honey-bee in the woods, they immediately conclude that the whites will soon follow.

Although Dr. Belknap believes that the honey-bee is a native of Mexico, and of the islands, and that it had extended itself as far to the northward as Florida and Georgia, yet he admits that this insect was not found in the more northern regions of America, previously to their discovery by the Europeans. "The first European settlement in Virginia", he observes, "was made about seventy years after the expedition of Soto, in Florida, and the first settlement in New-England, was ten years posterior to that in Virginia. The large intermediate country was uncultivated for a long time afterward. The southern bees therefore could have no inducement to extend themselves very far to the northward, for many years after the settlements were begun; and within that time bees were imported from Europe\*."

That the honey-bee is not a native of the northern parts of America is, I think, incontestibly proved by a variety of circumstances. These I shall consider under the two heads of *negative* and *positive* evidences.

Lawson does not mention this insect among the native animals of Carolina†.

The founder of Pennsylvania, in a long and interesting letter which he wrote to his friends, in the year 1683, takes no notice of bees. It is evident to any one who

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has

\* See the Dissertation, page 122.

† See his Voyage to Carolina, &c. London 1704. 4to.

has read this letter, that the great object which its author had in view, was to exhibit a flattering picture of the Province, with the design of enticing emigrants to make settlements in it. An insect whose products are so valuable as those of the bee would not, I think, have been omitted in the list of animals indigenous to the country of Pennsylvania, if Mr. Penn had had any certain intimations of its existence there. Neither do I find the bee mentioned by any of the early Swedish writers who published accounts of Pennsylvania.

I do not find that any of the writers on Virginia mention the honey-bee among the indigenous animals of the country. The little that Mr. Beverley has said on the subject, in his *History of Virginia*, rather authorises the supposition that this author did not consider the honey-bee as a native. "Bees, says he, thrive there abundantly, and will very easily yield to the careful Hufewife a full Hive of Honey, and besides lay up a Winter-store, sufficient to preserve their Stocks"†.

Dr. Belknap says, that in the languages of the Indians of New-England, there are no words for either honey or wax. Accordingly, when Mr. John Elliot, who was called *the Indian Evangelist*, undertook the arduous task of translating the Bible into the Natic-language, wherever these two words occurred, as they frequently do in the scriptures, he used the English words, though sometimes, indeed, with an Indian termination.

I consider this circumstance as a strong argument in favour of our common opinion, that the honey-bee is not a native of New-England. At the same time, however, I cannot help observing that as Mr. Elliot confined himself in the translation, which I have mentioned, to the  
language

† See page 282. Second edition. London : 1722. 8vo.

language spoken by the Natic-Indians\*, who used a dialect of the Mohegan, it does not follow, that none of the New-England nations had words in their languages for honey and wax. Since our intercourse with the Indians, their languages have become much more copious. As new objects, both of nature and of art, occurred, new words were formed. Thus, in the vocabulary of the Delaware-Indians, we find the words *gok*, *la pe chi can*, *poak sa can*, *wi sach gank*, *chey i nu tey*, all which have most probably been introduced into their language since their intercourse with the Europeans; for these words which I have mentioned, and it would be easy to mention many more, signify *money*, *a plough*, *a gun*, *rum*, *saddle-bag*: now we well know that before our acquaintance with these people, they had neither money, ploughs, guns, rum, or saddle-bags, among them. The Indians do not continue long acquainted with new objects, without giving names to them. As, therefore, the Natics had no words for honey and wax, it is highly probable, that about the year 1648, when Mr. Elliot was employed in translating the Bible, the honey-bee had not been introduced into that part of New-England which these Indians inhabited.

The Delaware-Indians call bees *a mo e wak*. Wasps are likewise, known by this name among these Indians. Several species of wasps are natives of our country: it seems very probable, therefore, that when the honey-bees were first introduced among them, the Delawares to save the trouble of inventing a new word for these little animals, thought the name by which they were accustomed to call the wasp sufficiently applicable to the bees; between which  
and

\* This is the spelling adopted by Dr. Douglass, &c. I suspect, however, that it ought to have been *Nahantics*. I find mention made of the Nahantics, and I know that they speak a dialect of the Nichegan. Of the Natics I know hardly any thing, but what Dr. Douglass has told us, viz. *that they existed*, and that about the year 1747, the nation was almost entirely extinct. See his *Summary*, &c. Vol. I. p. 172, *note*. London: 1760. 8vo.

and some species of wasps the resemblance is so great. Instances of this trouble-saving disposition of the Indians are numerous. The Cheerake, for instance, call a prisoner, or captive, or slave, *eeankke*, and they apply the same name to a pin, and an awl. It is difficult to say, what secret connection there is between a captive and a pin, or an awl. These same Indians call the penis *wato 'bre*, and a corn-house is known by the same name among them. In this instance, the use of only one word for two such opposite objects is more easily accounted for. Savages always think and speak metaphorically. They could not but reflect that whilst a corn-house is a deposit of the food of men, the penis is the organ by which the eternity of the human species is maintained.

I do not find the words honey or wax in the copious language of the Delaware-Indians\*. If this tribe have not words for these substances, my opinion, that the honey-bee is not a native of America, receives considerable additional support.

The Muhhekaneew, commonly known by the name of the Mohegans, speak a language very closely allied to that of the Delawares, as I shall fully demonstrate in my *Comparative view of the languages of the American nations with each other, and with the languages of the nations of the north-east parts of Asia*. In the language of the Mohegans, the honey-bee is called *aum warw*, honey *aum warw web focat*, and bees-wax *aum warw web pe mey*. Perhaps, it will be imagined, that the existence of these words in the Mohegan language is a proof that the bee is a native of their country. My opinion, however, is quite different, and, I think, it rests upon an unerring foundation.

In the first place, the resemblance between the Delaware and Mohegan words for the honey-bee is obvious.

\* They call the *Honey-Locust-Tree* (*Gleditsia triacanthos* of Linnæus) *pi te la we min sibi*.

I have already observed that the first of these nations call bees and wasps by the same name. It is probable that this is also the case among the Mohegans. If so, it would seem likely, that from the resemblance between the bee and some species of our native wasps, it was not thought necessary to impose a new name upon the honey-bee after it became a denizen of our woods. But this, it will be said, is treading on the ground of hypothesis. I shall, therefore, relinquish it.

The Mohegans, I have just said, call honey *aum waw web focat*. This is, undoubtedly, an Indian word. But let us analyse its precise, specific signification. The real meaning of the word *focat* is *sugar*, or *sweet*. Long before the nations of America had any intercourse with the Europeans, they made sugar from the *Acer saccharinum*, or *Sugar-maple*, and from some species of the genus *Juglans*, or *Walnut*. An appropriate word for this agreeable substance, of course, existed in their languages. When the honey of the bee was first examined by them, they could not fail to remark that its most striking property was its sweet taste. An assemblage of words was now formed for the newly-introduced substance. This assemblage, in the Mohegan tongue, reads thus, *sweet or sugar of bee*, for the word *web* signifies *of*. In like manner, the real meaning of *pe mey* is *grease, fat, or tallow*. All these are substances with which savages are but too familiar. When the Mohegans became acquainted with the wax of the bee, observing its resemblance to the different substances just mentioned, they seem to have thought it unnecessary to create a new word exclusively characteristic of it. The strict meaning of the word *aum waw web pe mey* is *grease, fat, or tallow, of bee*.

I am confirmed in my opinion on this part of my question by finding that the Natics, or Nahantics, had no words



words in their language for honey or wax\*. For, as I have already observed, these Indians and the Mohegans spake dialects of the same language. It is not probable, therefore, that one of the tribes would have these words and the other not, when we consider that ever since our acquaintance with them they have lived at no great distance from each other. And we have known them for more than one hundred and fifty years.

These are the principal *negative* evidences which I am able to adduce in support of my opinion, that the honey-bee is not an indigenous animal in the northern countries of the new-world. I call them *negative* evidences, because to most persons, I presume, they will not appear to be more. In my opinion, however, some of them run closely into the evidences of the *positive* kind.

The *positive* evidences and circumstances which support my opinion, are numerous. I shall confine myself to the chiefest of them.

Mr. John Josselyn, who was in New-England, for the first time, in the year 1638, and afterwards in 1663, and who wrote an account of his voyages, together with some very imperfect sketches of natural history in 1673, speaks of the honey-bee in the following words: "The honey-bees are carried over by the English, and thrive there exceedingly†."

Dr. Belknap says, "there is a tradition in New-England, that the person who first brought a hive of bees into the country was rewarded with a grant of land; but the person's name, or the place where the land lay, or by whom the grant was made, I have not been able to learn‡."

Perhaps,

\* See page 252 and 253.

† See his *Voyage to New-England*, p. 120.

‡ See the Dissertation, p. 123.

Perhaps, it will be said that these two circumstances by no means prove that the honey-bee was not a native of the countries of New-England. They only prove, it may be urged, that this little insect *was not known to be a native of those countries.*

They do not *absolutely prove* much more. But, on the one hand, I think it is highly improbable that the people of New-England would have been at the trouble of importing bees from Europe, if they were natives of the country; and, on the other hand, it is certainly not likely that a person would have received a grant of land, as Dr. Belknap has mentioned was the case, according to tradition, if the bees were already in the country. Had they been there, their existence could not but have been well known, unless we suppose that among them, as certain European writers have said of the aboriginal Americans, the principle of social union was extremely weak; so that these little insects, whose government has, for ages, excited the admiration of philosophers, may have been scattered, like the savages, in small families through vast tracts of uncultivated country, and not associated in large, civilized communities. It has been so much the rage to speculate falsely on the subject of America, that I should not be surprised to find such a writer as De Pauw, assigning a weakness of their political union as the reason why honey-bees were not discovered in the new-world. Raynal would, probably, reason thus likewise, had not this fine writer believed that there is something in the climate of America, that is unfavourable to the generation of good things. Ye philosophers of Europe! come visit our countries.

The Reverend Mr. Heckewelder informs me, that although he has seen the true honey-bees wild in various parts of the United-States, at some distance from the settlements of the whites, he has always been assured by the Indians,

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that

that these insects were not known in these countries before the whites began to settle them. This alone is a very heavy load of evidence in support of my opinion on the subject. The Indians, as I have already remarked are by no means incurious observers. Is it probable, therefore, that they should be mistaken on the subject, especially when it is remarked that they are, in general, extremely fond and voracious of honey? The bears are not more so.

The honey-bee was not found in Kentucky, when we first became acquainted with that fine country. But about the year 1780, a hive was brought, by a Colonel Herrod, to the Rapids of the Ohio, since which time these little insects have encreased prodigiously. Not long since, a hunter found thirty *wild* swarms in the course of one day\*.

Honey-bees were not known in that part of the state of New-York which is called the Jeneffie-Country, when it was first visited, nor even for a considerable time after. Of late, a few hives have been introduced, and these will, doubtless, soon extend themselves through the country; for there are always some discontented bees, which may be called deserters from the hive or colony; which roam in search of flowers in the woods, and seem to prefer as an habitation, the cavity of a tree to the artificial hive, in common use.

These deserters are, I think, peculiarly disposed to spread themselves along the courses of the creeks and rivers of our country, because the sides of these waters are frequently

\* It is worthy of observation, however, that as yet the bees of Kentucky do not make much honey. To those which have relinquished the habitations of the settlers, and have encreased in the woods, taking possession of the cavities of the forest-trees, the spontaneous flowers of the woods afford but a scanty portion of those substances from which the honey is formed. Nor do the cultivated bees manufacture a much larger quantity of this most agreeable and useful article. The country of Kentucky is but a recent settlement; and although, in the short term of twenty-three or twenty-four years, the encrease of its inhabitants has been astonishingly rapid, great tracts of it still continue nearly in the wild and unvaried state in which it came from the hands of him who made it. The cultivation of the *Buckwheat* is but little attended to in Kentucky. This, I have no doubt, is one of the principal reasons why the bees of this country do not manufacture much honey; for there is, perhaps, no plant to which the honey-bees in North-America are more attached than to the *Buckwheat*.

ly decorated with fine, rich, low grounds, commonly called *bottoms*, abounding in a variety of plants, which are agreeable to the bees, such as the *Polygonum scandens*, or *Wild-buckwheat*, and many others. So great is the attachment of the honey-bees to these situations, that sometimes they form a file, for a considerable distance, along a creek, or river, quaffing the nectar of the plants, but not venturing to extend themselves far from these agreeable situations.

The following quotation, from the Abbé Raynal's *Philosophical and Political History of the settlements and trade of the Europeans in both the Indies*, shall conclude what I have to say in support of my opinion, that the honey-bee is not an indigenous animal of the American continents. "North America," says this elegant writer, "was formerly devoured by insects. As the air was not then purified, the ground cleared, the woods cut down, nor the waters drained off, these little animals destroyed, without opposition, all the productions of nature. None of them were useful to mankind\*. There is only one at present, which is the bee; but this is supposed to have been carried from the old to the new world. The savages call it the English fly; and it is only found near the coasts. These circumstances announce it to be of foreign origin. The bees fly in numerous swarms through the forests of the new world. Their numbers are continually increasing, and their honey, which is converted to several uses, supplies many persons with food. Their wax becomes daily a considerable branch of trade†."

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\* What wretched philosophy! But, it is not my business, in this place, to expose the puerile weakness of these assertions of Raynal. I am not ignorant, indeed, that they nicely fit the system of certain writers who, in the fulness of a misguided zeal, or in that debasement of mind which almost necessarily arises out of the strong partialities for system, in the productions of the new-world, have been able to discover no energies of matter, and only an embryonic state of mind. I leave these philosophers to the enjoyments of their dreams.

† See Vol. VII. page 392 and 393. English Translation, by Justamond. London: 1788.

It appears, then, that the *apis mellifica*, or true honey-bee is *not* a native of America, but that we are indebted to Europe for this useful insect. It is difficult to tell at what time this species of bee was introduced into the different countries of America. I think it probable, however, that, in general, the emigrant-settlers would turn their attention to the honey-bee soon after they found themselves pretty well established in their new and happy territories.

I have already observed, that William Penn has made no mention of bees in his account of the natural productions of Pennsylvania\*. It is probable, therefore, that in the year 1683, when he wrote the letter, which I have mentioned, these insects had not been introduced into the Province. But their introduction does not appear to have been long subsequent to this period; for one Gabriel Thomas, a Quaker-preacher, who resided in Pennsylvania, for about fifteen years, viz. from 1681 to 1696, speaks of them in the following words: "*Bees* thrive and multiply exceedingly in those parts, the *Sweeds* often get great store of them in the woods, where they are free from any Body. Honey (and choice too) is sold in the Capital City for Five Pence *per* Pound†. Wax, is also plentiful, cheap, and a considerable Commerce‡". The same author, in his *Historical description of the province and country of West-New-Jersey*, says this province is "well provided" with bees§.

Perhaps, it will be thought that I have devoted more time to this inquiry than the subject merited. I will allow, that the question is not of much consequence to mankind, at large; but to a society of philosophers, every elucidation of a disputed point in natural history cannot but be,  
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\* See page 257.

† He means sterling.

‡ An historical and geographical account of the province and country of Pennsylvania, &c. page 23. London: 1698. 8vo.

§ See page 25. London: 1698. 8vo.

in some degree, interesting. If any farther apology should be thought necessary for my troubling you, gentlemen, with my sentiments on this question, I beg leave to remind you, that in almost every cultivated age and country, philosophers have thought that they were not altogether uselessly employed in collecting materials for the natural history of an animal so interesting to mankind as the BEE.

*Benjamin Smith Barton.*

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Nº. XXXII.

*An Account of a Comet.*

DEAR SIR,

Read Feb.  
15th, 1793.

ON the 11th of January last, in the evening, I discovered a comet in the Constellation Cepheus. That night and the following it appeared, to the naked eye, superior in brightness to a star of the 2d. magnitude. On the 13th, it was evidently diminished, and it continued to grow more faint until about a week ago, when it disappeared. It passed very rapidly through Cassiopea, Andromeda, the Triangle and Aries. January the 17th, it was near the first star of Aries, and on the 31st very near Flamsteed's 84th star of the Whale, and a little further south I saw it, for the last time, on the evening of the 8th of February.

Dear Sir,  
Yours, &c.

DAVID RITTENHOUSE.

To Robert Patterson, Secretary to  
the Philosophical Society.

Nº XXXIII.